

ASP.NET - DATABASE ACCESS

http://www.tutorialspoint.com/asp.net/asp.net_database_access.htm

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ASP.NET allows the following sources of data to be accessed and used:

- Databases *e. g. , Access, SQLServer, Oracle, MySQL*
- XML documents
- Business Objects
- Flat files

ASP.NET hides the complex processes of data access and provides much higher level of classes and objects through which data is accessed easily. These classes hide all complex coding for connection, data retrieving, data querying, and data manipulation.

ADO.NET is the technology that provides the bridge between various ASP.NET control objects and the backend data source. In this tutorial, we will look at data access and working with the data in brief.

Retrieve and display data

It takes two types of data controls to retrieve and display data in ASP.NET:

- **A data source control** - It manages the connection to the data, selection of data, and other jobs such as paging and caching of data etc.
- **A data view control** - It binds and displays the data and allows data manipulation.

We will discuss the data binding and data source controls in detail later. In this section, we will use a SqlDataSource control to access data and a GridView control to display and manipulate data in this chapter.

We will also use an Access database, which contains the details about .Net books available in the market. Name of our database is ASPDotNetStepByStep.mdb and we will use the data table DotNetReferences.

The table has the following columns: ID, Title, AuthorFirstName, AuthorLastName, Topic, and Publisher.

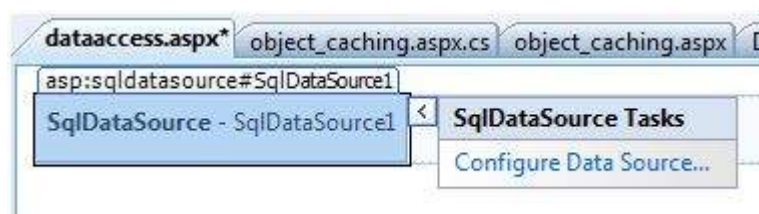
Here is a snapshot of the data table:



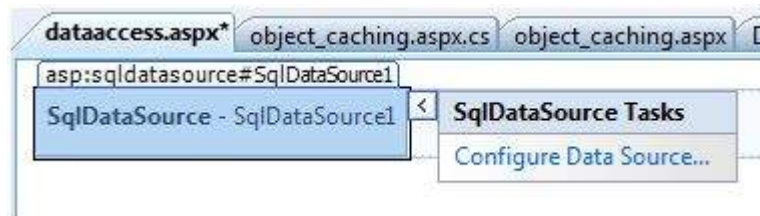
ID	Title	AuthorLastName	AuthorFirstName	Topic
1	Essentials .NET	Box	Don	Gestalt of .NET
2	Programming Microsoft Visual C#	Shepherd	George	C++ in the .NET World
3	ASP.NET Step by Step	Shepherd	George	ASP.NET from square one
4	Programming Microsoft ASP.NET	Esposito	Dino	ASP.NET comprehensive reference
5	Windows Forms Programming in .NET	Sells	Chris	Windows Uis usin .NET
6	Applied Microsoft .NET Framework	Richter	Jeffrey	Comprehensive .NET reference
7	.NET Compact Framework Progra	Yao	Paul	How to do .NET on small devices
8	.NET Framework Essentials	Thal	Thuan	How to do .NET development
9	Microsoft Visual Basic .NET Proge	MacDonald	Matthew	Digestible Visual Basic examples
10	Designing Microsoft ASP.NET App	Reilly	Douglas	ASP.NET Design topics
11	The C#	Hejlsberg	Anders	Definitive C# Reference
12	Programming Windows with C#	Petzold	Charles	The original Windows programming autho
13	The C# Infrastructure Annotated	Miller	Jim	Info from someone really close to the CLR

Let us directly move to action, take the following steps:

1 Create a web site and add a SqlDataSourceControl on the web form.



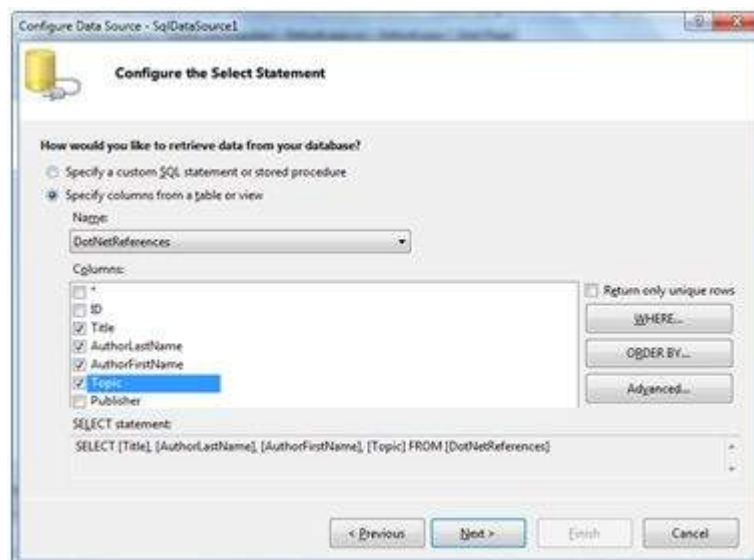
2 Click on the Configure Data Source option.



3 Click on the New Connection button to establish connection with a database.



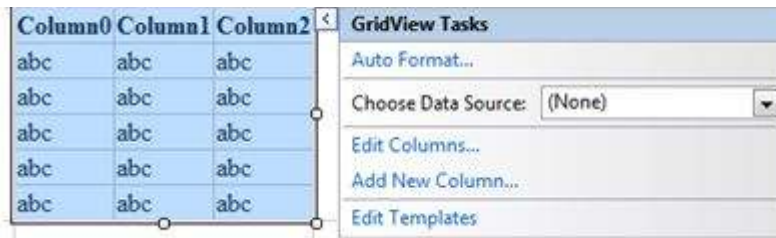
4 Once the connection is set up, you may save it for further use. At the next step, you are asked to configure the select statement:



5 Select the columns and click next to complete the steps. Observe the WHERE, ORDER BY, and the Advanced buttons. These buttons allow you to provide the where clause, order by clause, and specify the insert, update, and delete commands of SQL respectively. This way, you can manipulate the data.

6 Add a GridView control on the form. Choose the data source and format the control using AutoFormat option.

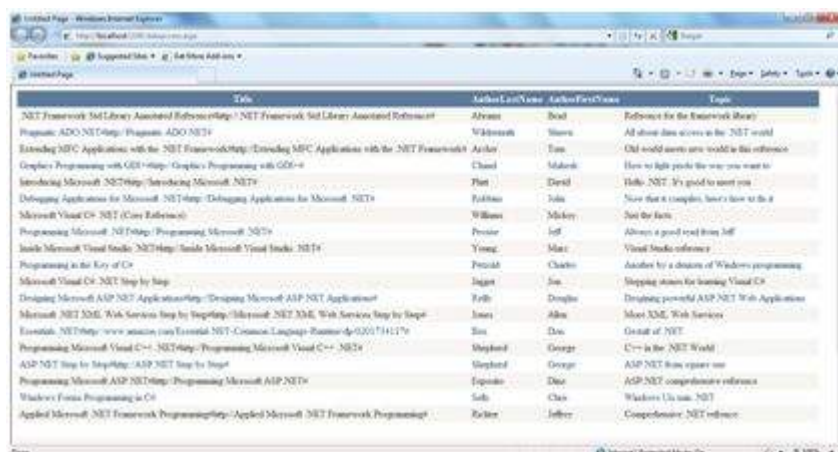




7 After this the formatted GridView control displays the column headings, and the application is ready to execute.

SqlDataSource - SqlDataSource1			
Title	AuthorLastName	AuthorFirstName	Topic
abc	abc	abc	abc
abc	abc	abc	abc
abc	abc	abc	abc
abc	abc	abc	abc
abc	abc	abc	abc

8 Finally execute the application.



The content file code is as given:

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="dataaccess.aspx.cs"
    Inherits="datacaching.WebForm1" %>

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
    "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml" >

    <head runat="server">
        <title>
            Untitled Page
        </title>
    </head>

    <body>
        <form >
            <div>

                <asp:SqlDataSource ID="SqlDataSource1" runat="server"
                    ConnectionString= "<%"
```

```

ConnectionStrings:ASPDotNetStepByStepConnectionString%>"
    ProviderName= "<%"$ ConnectionStrings:
        ASPDotNetStepByStepConnectionString.ProviderName %>"
    SelectCommand="SELECT [Title], [AuthorLastName],
        [AuthorFirstName], [Topic] FROM [DotNetReferences]">
</asp:SqlDataSource>

<asp:GridView ID="GridView1" runat="server"
    AutoGenerateColumns="False" CellPadding="4"
    DataSourceID="SqlDataSource1" ForeColor="#333333"
    GridLines="None">
    <RowStyle BackColor="#F7F6F3" ForeColor="#333333" />

    <Columns>
        <asp:BoundField DataField="Title" HeaderText="Title"
            SortExpression="Title" />
        <asp:BoundField DataField="AuthorLastName"
            HeaderText="AuthorLastName" SortExpression="AuthorLastName" />
        <asp:BoundField DataField="AuthorFirstName"
            HeaderText="AuthorFirstName" SortExpression="AuthorFirstName" />
        <asp:BoundField DataField="Topic"
            HeaderText="Topic" SortExpression="Topic" />
    </Columns>
    <FooterStyle BackColor="#5D7B9D"
        Font-Bold="True" ForeColor="White" />
    <PagerStyle BackColor="#284775"
        ForeColor="White" HorizontalAlign="Center" />
    <SelectedRowStyle BackColor="#E2DED6"
        Font-Bold="True" ForeColor="#333333" />
    <HeaderStyle BackColor="#5D7B9D" Font-Bold="True"
        ForeColor="White" />
    <EditRowStyle BackColor="#999999" />
    <AlternatingRowStyle BackColor="White" ForeColor="#284775" />
</asp:GridView>
</div>
</form>
</body>
</html>

```

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